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R E P O R T

—OF—

JOHN H. WADE,
OF WASHINGTON COUNTY,

—AND—

SAMUEL J. TWILLEY,
OF WORCESTER COUNTY.

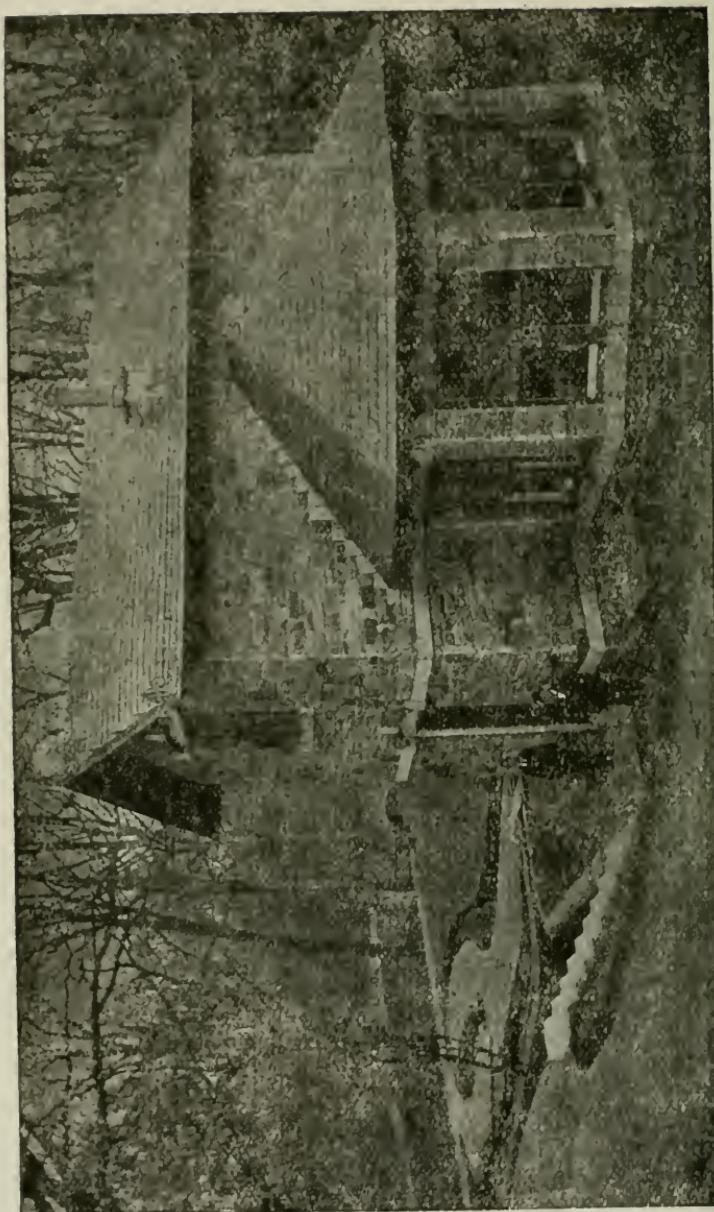
THE
Commissioners of Fisheries
OF MARYLAND

—FOR—

1910-1911.



BALTIMORE:
KING BROS.
STATE PRINTERS,
E. LEXINGTON STREET,
1911.



STATE FISH HATCHERY, DRUID HILL PARK.

LIST OF FISH COMMISSIONERS OF MARYLAND

Western Shore.

T. B. FERGUSON.....	1874-1875.....	PHILIP W. DOWNES.
T. B. FERGUSON.....	1876-1877.....	PHILIP W. DOWNES.
T. B. FERGUSON.....	1878-1879.....	THOMAS HUGHLETT, SR.
T. B. FERGUSON.....	1880-1881.....	THOMAS HUGHLETT, SR.
T. B. FERGUSON	1882-1883.....	THOMAS HUGHLETT, SR.
G. W. DELAWDER.....	1884-1885.....	DR. E. W. HUMPHREYS.
G. W. DELAWDER.....	1886-1887.....	DR. E. W. HUMPHREYS.
G. W. DELAWDER.....	1888-1889.....	STEPHEN P. TOADVINE.
G. W. DELAWDER.....	1890-1891.....	GRANVILLE R. RIDER.
RICHARD T. BROWNING.....	1892-1893	JOHN S. SUDLER.
RICHARD T. BROWNING.....	1894-1895.....	JOHN S. SUDLER.
JOHN E. GNAGEY.....	1896-1897.....	JAMES C. TAWES.
A. F. GEORGE.....	1898-1899.....	JOHN E. STERLING.
JESSE W. DOWNEY.....	1900-1901.....	CLARENCE L. VINCENT.
JESSE W. DOWNEY.....	1902-1903.....	CLARENCE L. VINCENT.
CHARLES F. BROOKE.....	1904-1905.....	JAMES D. ANDERSON.
CHARLES F. BROOKE.....	1906-1907.....	JAMES D. ANDERSON.
JOHN H. WADE.....	1908-1909.....	SAMUEL J. TWILLEY.
JOHN H. WADE.....	1910-1911.....	SAMUEL J. TWILLEY.



FALLS OF MUDDY CREEK—GARRETT COUNTY.

REPORT.

To HIS EXCELLENCY,

AUSTIN L. CROTHERS,

GOVERNOR OF MARYLAND:

Sir: We have the honor to present herewith the biennial report of the Fish Commissioners of Maryland for the years 1910 and 1911, as required by the laws of the State.

Your Commissioner for the Eastern Shore shows by statistics embodied in this report that a great work has been accomplished in the artificial propagation of shad and perch during these two years, and especially the year 1911, as conditions were not as favorable in 1910 as they have been this year, but taken together the work has far exceeded our expectations.

Shad and perch have been planted in all the rivers of the Eastern Shore in a systematic and thorough manner for which we commend our deputies and their assistants. That our work is appreciated by the people of the State is evidenced by the great number of letters we have received from every section asking for young fish and commanding the work already done.

During the season of 1908-9 shad were hatched out in large numbers and placed in the waters of the State. Good results were evidenced by the public this year in the great numbers caught and the comparatively low price of this great food fish. Shad were sold in the Baltimore markets as low as 30 cents per pair. Many of these shad were caught in the sound and bay before they had reached the natural spawning ground. While we are pleased that the catch of shad was large and profitable we regret that a law is not on the statute-books of the State requiring all seines and pounds to be so raised from Saturday at sundown to one o'clock Monday morning during the fishing season, that more shad may

be able to reach the spawning grounds at the heads of the rivers, and by this means increase the number of young fry in the way nature intended. At the same time it would enable the Fish Commission to secure more eggs for hatching purposes.

We desire to call your attention to the millions of young yellow perch that have been planted in the rivers of the Eastern Shore during the past two years. We have been encouraged to continue this work by the splendid results obtained. Yellow perch are not prized by Marylanders as highly as the white perch, which has no superior as a pan fish, but commercially the yellow perch is outstripping all others. During the winter months they are shipped in large quantities to New York and other northern cities and bring from 15 cents to 20 cents per pound, and as they are more productive than any other kind of fish, are hardy and will live and thrive in all the flowing streams, they are naturally of great commercial value to the State.

We desire to extend our thanks to you for the encouragement you have given us in the work to which we were assigned, and assure you of our high appreciation of the same.

Your Commissioner for the Western Shore desires to report that in the winter of 1910, we placed on the screens at Druid Hill Park Hatchery one million (1,000,000) brook trout eggs, which were hatched and cared for until of a size to ship to the various people who had applied for them. The output was large, and a fair estimate of loss by death would not exceed fifty thousand (50,000).

The later part of April, we placed in the State Nursery at Lake Brown, Garrett County, Md., under the supervision of R. T. Browning, Assistant Fish Commissioner, one hundred thousand (100,000) of these fry, four months old. These fry were cared for by Mr. Browning until August, when a

heavy rain overflowed the troughs at the Nursery, necessitating our distributing the fry earlier than expected. We also received at the Nursery about this time, thirty thousand (30,000) brook trout fry from the U. S. Fish Commissioner which were used in stocking the spring streams of Garrett, Alleghany and Washington Counties. In April, we received at Druid Hill Park Hatchery, sixteen and one half million (16,500,000) white and yellow perch eggs, which were hatched and distributed.

Owing to the run of shad being small in the spring of 1910, we were only able to secure about six hundred thousand eggs (600,000) for the Park Hatchery which we hatched and distributed. We would like to call your attention to the fact of the very large number of eggs handled, and to state that the facilities for hatching these kinds of fish at the Park are very poor.

The people seem to have found the worth of the yellow perch, and are continually urging that the output of this fish be increased.

In the winter of 1911, we placed on the screens one and one half million (1,500,000) brook trout eggs which we hatched and cared for at the Park Hatchery until a suitable size to distribute. Our estimate of the loss being about two hundred and fifty thousand (250,000). A very good proportion; owing to the very cramped condition of the hatchery.

During this season we stocked streams in every County on the Western Shore and a great many in Southern Maryland. In the spring we received fifty million (50,000,000) white and yellow perch eggs which were hatched and distributed to parties who had applied for them.

Later we received five million (5,000,000) shad eggs which were cared for and distributed as in former years. We stocked the Nursery with one hundred thousand (100,000) brook trout fry which were cared for by the Assistant Fish Commissioner and distributed by him as heretofore. The

reports from all sources have been very gratifying and we feel very much encouraged.

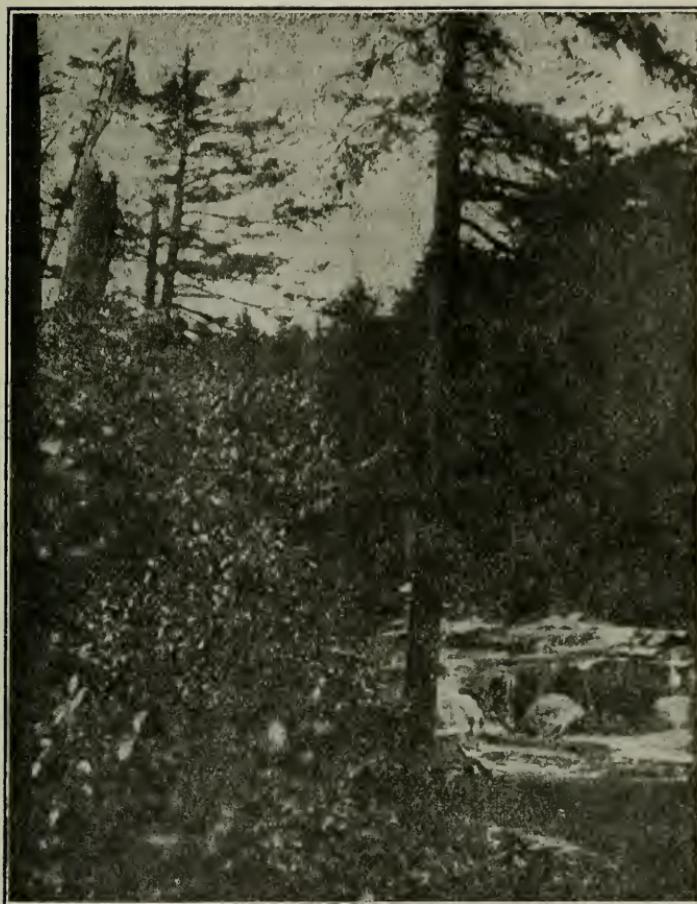
In our opinion another hatchery should be built for the Western Shore and equipped to take care of the increased demand for brook trout and other fry. Also that the Hatchery at Druid Hill Park be re-equipped, as the present equipment has been in use for nearly forty years and consequently in bad condition. To do this work an appropriation should be granted by the next Legislature, large enough to cover the cost.

We desire to express our thanks to the U. S. Fish Commissioner for courtesies extended the Maryland Fish Commission and to State Game Warden Horace F. Harmonson, Esq., for his co-operation with our work. Also to the newspapers of the State for their flattering reports of the work of this department of your administration.

Repectfully submitted,

SAMUEL J. TWILLEY,
Fish Commissioner for the Eastern Shore.

JOHN H. WADE, M. D.,
Fish Commissioner for the Western Shore.



WHERE TROUT ARE TO BE FOUND.

Distribution of Brook Trout and Black Bass from Maryland State Hatchery, Drud Hill Park, 1910.

DATE.	APPLICANT.	WHERE DISTRIBUTED.
Feb. 16.	J. Hopkins Smith, Jr.	Dimits Branch, Baltimore Co.
Feb. 22	Wm. Waller Cullen	Tuscarora, Frederick Co.
March 22.	Talbott Denmead	Stream, Baltimore Co.
March 22.	Cumberland Dugan	Stream, Baltimore Co.
March 22.	James C. Glittings	Beaver Run, Carroll, Co.
March 22.	William Lynch	Morrison Branch, Baltimore Co.
March 22.	J. F. Billingslea	Lancaster Branch, Baltimore Co.
March 22.	Henry A. Haker	Pond, Prince George's Co.
March 23.	George Kluna	Hunting Creek, Frederick Co.
March 23.	P. C. Gorman	Beaver Run, Prince George's Co.
March 23.	Edward A. Cockey	Butler's Stream, Baltimore Co.
March 24.	Josiah P. Wiley	Falling Branch, Harford Co.
March 25.	Irving E. McCullough	Cold Spring, Baltimore Co.
March 25.	William E. Armacost	Stream in Baltimore Co.
March 26.	W. C. Todd	Silver Lake, Caroline Co.
March 26.	J. J. Benson	Pond in Anne Arundel Co.
March 26.	Charles H. Isley	Mine Branch, Harford Co.
March 28.	Millard F. Randolph	Pond in Montgomery Co.
March 28.	Thomas F. Nagle	Thomas' Run, Harford Co.
March 28.	J. W. F. Burgoon	Gunpowder Falls, Carroll Co.
March 29.	George T. Sherman	Williams' Stream, Harford Co.
March 29.	S. H. Mitchell	Bread and Cheese Br'nc'h, Harford Co.
March 29.	Norman Z. Hoke	Town's Creek, Frederick Co.
March 29.	Wm. F. Eckenrode	Fairview Pond, Carroll Co.
March 29.	Runerna H. Hewitt	Pond in Montgomery Co.
March 29.	Francis B. Staub	Mountain stream, Frederick Co.
March 29.	Edward Quarles	Tobacco Run, Harford Co.
March 29.	George W. Crum	Biser's Creek, Frederick Co.
March 29.	John S. Harman	Beaver Run, Carroll Co.
March 30.	H. C. Harris	Stream in Baltimore Co.
March 30.	T. Melville Pearce	Barns' Branch, Baltimore Co.
March 30.	Dominico Giampooli	Deep Run, Howard Co.
March 30.	William R. Titus	Titus' Pond, Frederick Co.
March 30.	Thomas P. Dukehart	Lee's Branch, Baltimore Co.
March 31.	J. Herbert Hook	Whitemarsh Run, Baltimore Co.
March 31.	Charles V. Harp	Pond in Frederick Co.
March 31.	A. S. Ripple	Piscataway Creek, Prince G'rge's Co.
April 1.	Jacob Eckstine	Millspring, Washington Co.
April 2.	J. E. Morgan	Pond in Queen Anne's Co.
March 2.	R. L. Purnell	Trappe Creek, Worcester Co.
April 2.	Franklin P. Fenby	Stream, Harford Co.
April 2.	E. W. Day	Santee Branch, Baltimore Co.
April 4.	Wallace Broadbelt	Pond in Anne Arundel Co.
April 4.	Richard M. Harkins	Murphy's Branch, Harford Co.

DATE.	APPLICANT.	WHERE DISTRIBUTED.
April 4.	B. C. Knetzer.....	Red Run, Baltimore Co.
April 4.	William M. Harris.....	Poe's Branch, Carroll Co.
April 5.	Thomas G. Mumford..	Carroll Creek, Frederick Co.
April 5.	B. Harrison Bright ...	Bright's Pond, Queen Anne'Co.
April 5.	Charles S. Hilton.....	Hilton's Pond, Montgomery Co.
April 5.	D. C. Dayhoff.....	Little Antietam, Washington Co.
April 5.	R. Ragan Spenceer.....	Black Rock, Baltimore Co.
April 7.	James Burch	Spring Run, St. Mary's Co.
April 11.	John W. Burns.....	Mine Run, Baltimore Co.

Distribution of Brook Trout and Black Bass From Maryland State Hatchery, Druid Hill Park, 1911.

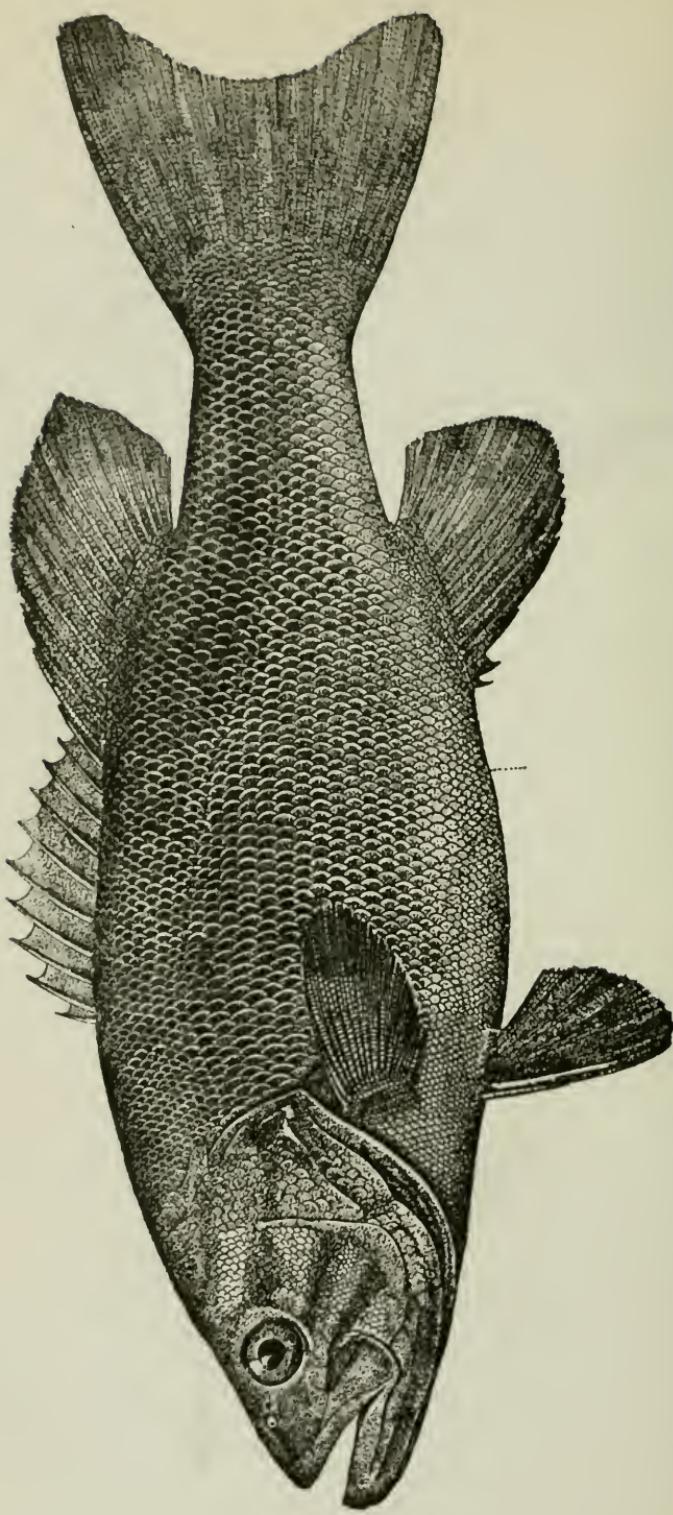
DATE.	APPLICANT.	WHERE DISTRIBUTED.
Jan. 26.	William J. Grove.....	Old Quary, Frederick Co.
Feb. 9.	R. Ragan Spenceer.....	North Run, etc., Baltimore Co.
Feb. 9.	Thomas W. Offet.....	Riders Run, Baltimore Co.
Feb. 9.	Sifford Pearre.....	Stream, Baltimore Co.
Feb. 9.	James L. Goodwin.....	Pond, in Baltimore Co.
Feb. 15.	George Brown, Jr.....	Dipping Pond, Baltimore Co.
Feb. 15.	Thomas G. Fisher.....	Poplar Lick, Garrett Co.
March 1.	Van Lear Black.....	Patuxent, Howard Co.
March 1.	William Middleditch...	Hazeldel, Harford Co.
March 1.	William Fell Johnson..	Monks Branch, Baltimore Co.
March 1.	W. T. Hignutt.....	Millpond, Caroline Co.
March 1.	Louis C. Etchison.....	Poplar Branch, Frederick Co.
March 3.	I. Robert Lichlustem..	Bennet's Creek, Frederick Co.
March 4.	Frederick Todd.....	Branch of G. S., Baltimore Co.
March 4.	Xaverian Brotherhood..	Xavier Brook, St. Mary's Co.
March 6.	George Kinney.....	Hunting Creek, Frederick Co.
March 6.	Martin E. Horst.....	Farm Spring, Washington Co.
March 6.	Albert S. Braun.....	Anto, Baltimore Co.
March 6.	N. E. Miller.....	Pleasant Valley, Baltimore Co.
March 6.	T. J. Miller.....	Miller's Pond, Baltimore Co.
March 6.	D. C. Payhoff.....	Lit. Antietam, Washington Co.
March 6.	Wilbert Hutchins.....	Hutchins Stream, Baltimore Co.
March 6.	Dr. E. Almony.....	Charles Run, Baltimore Co.
March 8.	F. W. Fraley.....	Mountain Stream, Frederick Co.
March 8.	William N. Mays.....	Trib. to Lit. Gunpowder, Balto. Co.
March 9.	Elmer Hendrix.....	Stream, Baltimore Co.
March 9.	Valentine B. Reichard..	Stream, Washington Co.
March 10.	J. Thomas Davis.....	Hunting Creek, Frederick Co.
March 10.	W. C. Hammond.....	Cat Tail Creek, Howard Co.

DATE.	APPLICANT.	WHERE DISTRIBUTED.
March 12.	Robert Lee Hartle.....	Lit. Antietam, Washington Co.
March 13.	H. N. Ankeney.....	Lit. Conoccheagu, Washington Co.
March 13.	Henry H. Ducker.....	Hollingsworth Branch, Balto. Co.
March 14.	Jesse C. Cognnis.....	Sanitarium Lake, Pr. George's Co.
March 15.	Bruce V. Hoffman.....	Lit. Antietam, Washington Co.
March 16.	J. G. M. Reese.....	Stream, Baltimore Co.
March 18.	James E. Higman.....	Mill Pond, Queen Anne's Co.
March 18.	David H. Snively.....	Branch of Antietam, Washington Co.
March 20.	John M. Walker.....	Red Run, Baltimore Co.
March 20.	Charles I. Grim.....	Stream, Washington Co.
March 21.	S. W. Pfoutz.....	Priest Land Branch, Carroll Co.
March 21.	W. H. Forsythe.....	Hickey's Branch, Howard Co.
March 21.	John M. Dennis.....	Pond, in Baltimore Co.
March 21.	G. H. McPherson.....	Saw Mill Branch, Anne Arundel Co.
March 21.	Wade H. Crossmore.....	Big Gunpowder, Baltimore Co.
March 22.	Samuel English.....	Rock Creek, Montgomery Co.
March 22.	J. Frank Huff.....	Mill Run Branch, Harford Co.
March 22.	James C. Forsyth.....	Hickey's Branch, Howard Co.
March 24.	V. R. Cline.....	Middle Creek, Frederick Co.
March 24.	William R. Blunk.....	Stream, Carroll Co.
March 24.	Robinson C. Waters.....	Feeder to Piney Creek, Balto. Co.
March 26.	Gilbert B. Benson.....	Huckleberry Creek, Baltimore Co.
March 27.	William H. Grothe.....	Pond, Baltimore Co.
March 27.	John G. Bassler.....	Pond, Howard Co.
March 30.	Lewis T. Street.....	White Marsh Run, Baltimore Co.
March 30.	Thomas J. Lindsey.....	Stream, Carroll Co.
Apr. 1.	Dr. H. J. Burton.....	Stream, Baltimore Co.
Apr. 1.	T. S. Fitchett.....	Laurel Brook, Harford Co.
Apr. 1.	W. V. Winemiller & Bro.	Billingsley Branch, Balto. Co.
Apr. 3.	James S. Durvall.....	West Stream, Montgomery Co.
Apr. 5.	Frank Billingslea.....	Whiteford Branch, Harford Co.

Distribution of Perch from State Hatchery, Druid Hill Park, 1911.

DATE.	APPLICANT.	WHERE DISTRIBUTED.
Feb. 7.	J. A. Zimmerman	Severn River, Anne Arundel Co.
Feb. 28.	Arthur Boehm.....	Severn River, Anne Arundel Co.
March 4.	J. DeCourcey Brennan	Severn River, Anne Arundel Co.
March 6.	John K. Rice	Severn River, Anne Arundel Co.
March 8.	J. Fill Legg.....	Lake Anna, Queen Anne's Co.
March 8.	R. E. Zimmerman.....	Severn River, Anne Arundel Co.
March 16.	Arthur D. Foster.....	Severn River, Anne Arundel Co.
March 20.	John M. Walker.....	Red Run, Baltimore Co.
March 26.	Gilbert B. Benson.....	Stream in Baltimore Co.

DATE.	APPLICANT.	WHERE DISTRIRUTED.
March 27.	Oscar Weems.....	Gales Lake, Kent Co.
March 27.	J. N. Benson.....	Pond in Anne Arundel Co.
March 30.	Robt. S. Weisenfeld....	Lake in Baltimore Co.
Apr. 1.	W. C. Hammond.....	Pond in Howard Co.
Apr. 3.	Samuel Adler.....	Pond in Baltimore Co.
Apr. 3.	Henry Matthews.....	Cat Tail Creek, Howard Co.
Apr. 13.	R. R. Milliner.....	Craney Lake, Queen Anne's Co.
Apr. 14.	Granville Heaps.....	Broad Creek, Harford Co.
Apr. 22.	John M. Little.....	Falls Stream, Baltimore Co.
May 4.	Dr. J. L. LeMar.....	Herring Run, Baltimore Co.
May 11.	Pembroke M. Wimbie..	Severn River, Anne Arundel Co.



BLACK BASS.

BROOK TROUT.

The brook trout is not only one of the most beautiful of our fishes, but, as every angler knows, is a fine game fish, while its flavor will delight the most epicurean taste. It prefers clear, cold, swift streams, such as is found in the western part of our State, and which, at one time, was thickly populated by this very fine game and food fish, and we believe that if the work of the last three or four years is continued, that once more many of those streams can be made to abound with brook trout and thus delight the heart of the angler and become a source of not only pleasure but profit to our people. Twenty years ago trout of two, three and even four pounds were not uncommon in Western Maryland. Those fine large trout were of the same species and variety as the fingerling, which many bring home nowadays boasting of their skill as anglers. No brook trout should be taken less than six inches. A trout five inches long is never over a year old and, therefore, has had no chance to spawn.

We have greatly increased the output of brook trout.

SHAD.

A great many persons have asked us how we know the shad returns to the place of its birth, and it gives us pleasure to tell the story in a condensed form so that the fact that the young shad will return in two or three years from the time it is planted to the river in which it is placed will be so impressed upon the minds of all that not a doubt will exist:

Prior to 1871, the shad was unknown to the Pacific coast. That year the United States Fish Commission carried from Havre de Grace, Maryland, a number of young shad such as we plant now in the rivers of this State, and planted them in the Sacramento river, California. Two years later the first shad ever seen in California waters was caught, the next year more were captured and the number has increased from year to year, until now California produces millions of

the finest shad known. After the shad spawns in the Spring it returns again to the ocean, the young do the same and return full grown to the fresh water stream where they first entered into life, ready to commence the increase of their kind.

The periodic movement of shad from the ocean into the fresh-water streams of the Atlantic Coast is one of its most characteristic and well-known habits. This migration begins in the early Winter in Florida and involves all suitable streams as far north as the Gulf of St. Lawrence, which is reached in midsummer. The influx in each basin proceeds gradually from south to north, and the arrival in a given locality is usually about the same time each year and can be predicted with considerable accuracy. Prior to this regular advent of the schools, no shad are in the rivers, and after the completion of the spawning process, which ensues immediately on reaching the headwaters, the adults return to the salt water, and only stragglers are found during the remainder of the season or until the following year.

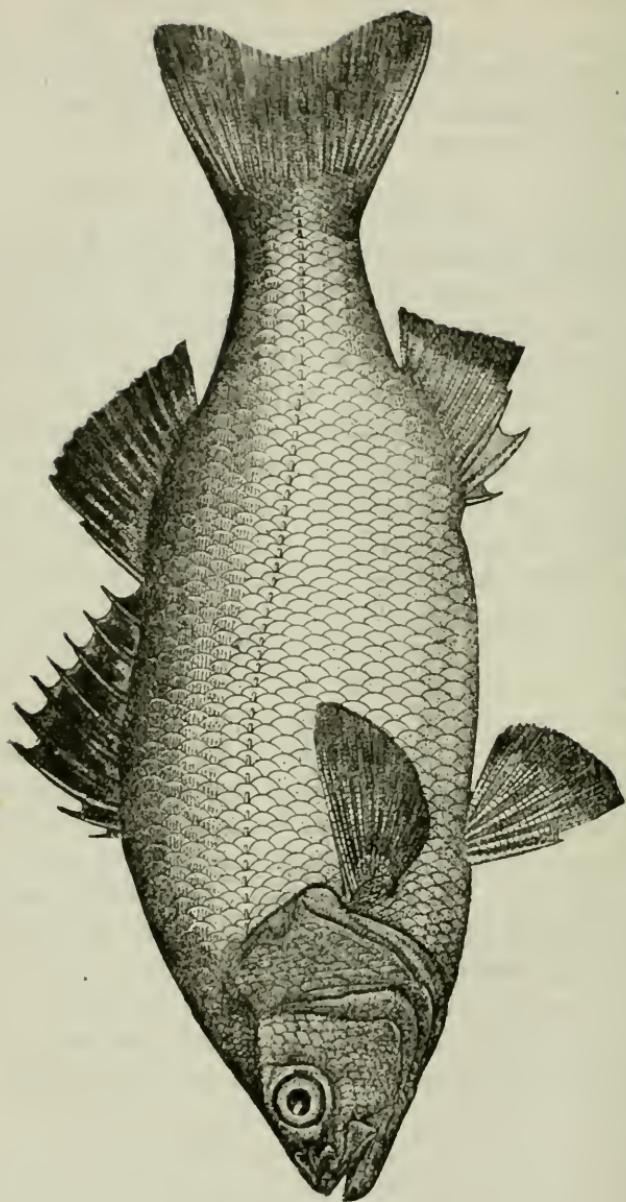
LARGE-MOUTHED BLACK BASS.

It is next to impossible to successfully obtain Bass eggs for artificial propagation and the only way they have been obtained is by pond breeding. We have been able to obtain from the United States Fish Commission, through the indorsements of Senators Isidor Rayner and John Walter Smith, quite a number of fingerling bass, which have been planted in numerous ponds and rivers in Maryland. The large-mouthed black bass is second only to its congener, the small-mouthed species, as a game fish. On the Pocomoke river in Worcester county it is caught by means of the artificial fly and artificial minnow, both of which it takes voraciously and makes a good fight before it is landed. This fish has many vernacular names, among which may be mentioned: Large-mouthed black bass, straw bass, green bass, welshman, club, and many others, more or less absurd. The

most distinctive and expressive name is doubtless large-mouthed black bass. In the western section of the State bass have been plentiful for many years, but it is absolutely necessary to replenish the streams each year because of the great destruction going on at all times.

YELLOW PERCH.

This fish is now greatly in demand as a winter fish. In most parts of its range it is highly esteemed, and in many places it is of very considerable commercial importance, and this can truthfully be said of our own State. The Baltimore markets are an evidence of this statement. In the winter months a visit to the fish stalls in the several markets of Baltimore city will convince one that the commercial value of the yellow perch has not been overstated by your Commissioners. As a game fish the yellow perch can be commended chiefly on account of the fact that anybody can catch it. It can be taken with the hook and line any month in the year and with any kind of bait—angle worms, grubs, small minnows, pieces of fish and the artificial fly. It is easily taken through the ice in winter, when small minnows are the best bait. A yellow perch in the Fish Commission aquarium at Washington deposited a string of eggs three feet four inches long, four inches wide at one end and two at the other. After being fertilized this string weighed two pounds nine ounces, while the weight of the fish before the eggs were discharged was one pound eight ounces. The eggs are very small, measuring only one-eighteenth of an inch in diameter, and requiring 28,000 to the quart. This fish is not prized so highly as the white perch, but it is an excellent substitute when the white perch is unobtainable.



WHITE PERCH.

HATCHING OPERATIONS
OF THE
Commissioner of Fisheries
FOR THE
EASTERN SHORE
1910-1911.

White Perch Hatched at St. Martin's Hatchery,

March 21, 1910, to April 9, 1910.

<i>Date.</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
March 21.....	300,000	275,000
March 22.....	400,000	300,000
March 24.....	500,000	400,000
March 25.....	500,000	400,000
March 26.....	350,000	280,000
March 30.....	200,000	150,000
April 2.....	1,500,000	1,400,000
April 4.....	500,000	400,000
April 7.....	25,000	20,000
April 8.....	25,000	20,000
April 9.....	50,000	40,000
	<hr/>	<hr/>
	4,350,000	3,285,000

WHERE DEPOSITED.

St. Martin's River.....	275,000
St. Martin's River.....	300,000
Pocomoke River.....	400,000
Trappe Creek.....	400,000
Showell Creek.....	280,000
Pocomoke River.....	150,000
St. Martin's River.....	1,400,000
Manokin and Pocomoke Rivers.....	400,000
Manokin River.....	20,000
Perkin's Creek.....	40,000
	<hr/>
	3,285,000

HENRY T. BELL,
Deputy.

Yellow Perch Hatched at St. Martin's Hatchery

From March 14, 1910 to March 31, 1910.

<i>Date</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
March 14.....	1,000,000	900,000
" 15.....	2,000,000	1,700,000
" 16.....	2,000,000	1,800,000
" 17.....	1,500,000	1,450,000
" 18.....	1,500,000	1,250,000
" 21.....	3,500,000	3,250,000
" 22.....	2,000,000	1,800,000
" 23.....	2,000,000	1,800,000
" 24.....	1,000,000	900,000
" 25.....	2,000,000	1,800,000
" 28.....	1,000,000	900,000
" 30.....	500,000	450,000
" 31.....	500,000	450,000
	<hr/> 20,500,000	<hr/> 18,050,000

WHERE DEPOSITED.

St. Martin's river	900,000
Manklin's creek.....	1,700,000
Showell creek.....	1,800,000
Taylor's creek.....	1,450,000
Herring creek.....	1,250,000
St. Martin's river	3,250,000
Trappe creek.....	1,800,000
Pocomoke river.....	1,800,000
Wicomico river.....	900,000
St. Martin's river	1,800,000
Pocomoke river	900,000
Ayres creek.....	450,000
St. Martin's river.....	450,000
	<hr/> 18,050,000

HENRY T. BELL,
Deputy.

White Perch Hatched at St. Martin's Hatchery,
March 15 to 31, 1911.

<i>Date.</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
March 15.....	1,000,000	900,000
March 20.....	50,000	40,000
March 25.....	900,000	800,000
March 29.....	1,000,000	900,000
March 31.....	50,000	40,000
	<hr/> <hr/> 3,000,000	<hr/> <hr/> 2,680,000

WHERE DEPOSITED.

Pocomoke River.....	900,000
Pocomoke River.....	40,000
St. Martin's River.....	800,000
St. Martin's River.....	900,000
St. Martin's River	40,000
	<hr/> <hr/> 2,680,000

HENRY T. BELL,
Deputy.

Yellow Perch Hatched at St. Martin's Hatchery,

From March 10 to 31, 1911.

<i>Date.</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
March 10.....	1,000,000	900,000
March 11.....	500,000	300,000
March 13.....	2,000,000	1,500,000
March 14.....	1,000,000	800,000
March 15.....	2,000,000	1,900,000
March 16.....	500,000	400,000
March 17.....	2,000,000	1,500,000
March 18.....	1,000,000	800,000
March 20.....	2,000,000	1,600,000
March 22.....	2,000,000	1,800,000
March 23.....	1,800,000	1,500,000
March 24.....	1,000,000	900,000
March 25.....	2,000,000	1,900,000
March 27.....	3,000,000	2,500,000
March 28.....	500,000	300,000
March 29.....	500,000	400,000
March 31.....	500,000	400,000
	<hr/>	<hr/>
	23,300,000	19,400,000

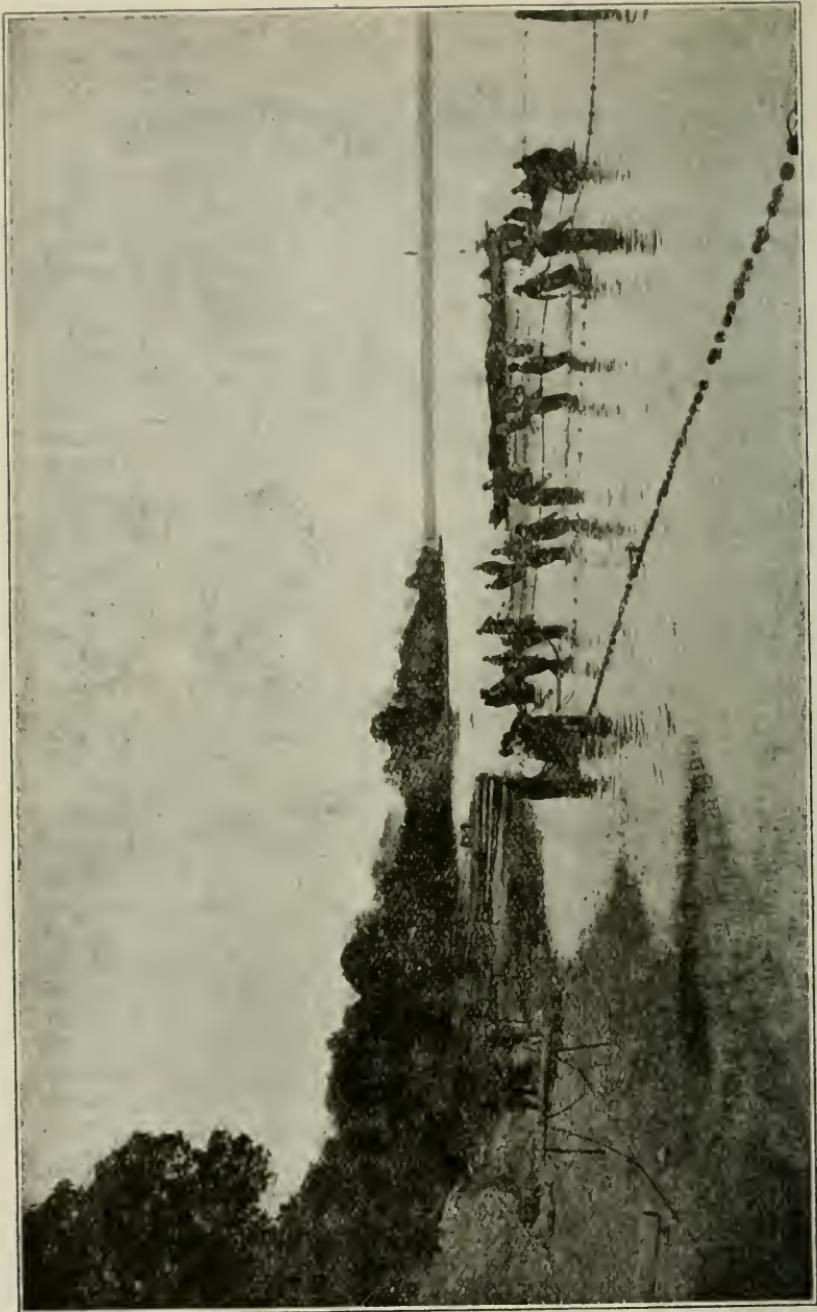
WHERE DEPOSITED.

St. Martin's River.....	1,200,000
Pocomoke River.....	1,500,000
St. Martin's River.....	800,000
Pocomoke River.....	1,900,000
Manokin River.....	2,300,000
At Kingston.....	1,600,000
At Snow Hill	1,800,000
Wicomico River.....	1,900,000
Wicomico River.....	900,000
St. Martin's River.....	1,900,000
Trappe Creek.....	2,500,000
St. Martin's River.....	1,100,000
	<hr/>
	19,400,000

HENRY T. BELL,

Deputy.

Hauling Seine for Shad.



Sharptown Hatching House, 1910.

	<i>Yellow Perch Stripped.</i>	<i>Fry Obtained</i>
Monday, March 28th.....	400	12,000,000
Tuesday, March 29th.....	600	18,000,000
Wednesday, March 30th.....	600	18,000,000
Thursday, March 31st.....	500	15,000,000
Friday, April 1st.....	40	1,200,000
Saturday, April 2d.....	40	1,200,000
	2,180	65,400,000

TURNED OUT:

March 30th, Nanticoke river.....	12,000,000
March 31st, Nanticoke river.....	18,000,000
April 1st, Nanticoke river.....	18,000,000
April 2d, Nanticoke river.....	15,000,000
April 4th, Marshy Hope river.....	1,200,000
April 5th, Marshy Hope river.....	1,200,000
	65,400,000

S. P. TWIFORD,
Deputy.

Sharptown Hatching House, 1910.

	<i>"White Perch"</i> <i>Stripped.</i>	<i>Fry Obtained.</i>
Monday, March 28th.....	20	600,000
Tuesday, March 29th.....	15	450,000
Wednesday, March 30th.....	25	750,000
Thursday, March 31st.....	30	900,000
Friday, April 1st.....	30	900,000
Saturday, April 2d.....	..	.....
Monday, April 4th.....	50	1,500,000
Tuesday, April 5th.....	30	900,000
Wednesday, April 6th.....	30	900,000
Thursday, April 7th.....	30	900,000
Friday, April 8th.....	30	900,000
Saturday, April 9th.....	25	750,000
Monday, April 11th.....	25	750,000
Tuesday, April 12th.....	30	900,000
Wednesday, April 13th.....	45	1,350,000
Thursday, April 14th.....	35	1,050,000
Friday, April 15th.....	20	600,000
Saturday, April 16th,.....	10	300,000
Monday, April 18.....	20	600,000
	500	15,000,000

TURNED OUT.

April 2, Marshy Hope river.....	1,050,000
5, " " "	1,650,000
6, Nanticoke river	900,000
8, " " Truits wharf.....	1,500,000
9, " "	900,000
13, " "	1,800,000
14, " " Riverton.....	1,650,000
15, " "	1,650,000
18, " "	2,400,000
19, Plumb Creek.....	600,000
21, " "	600,000
	15,000,000

S. P. TWIFOLD,
Deputy.

Sharptown Hatching House, 1910.

	<i>Shad Stripped.</i>	<i>Fry Obtained.</i>
Monday, April 4th.....	3	90,000
Tuesday, April 5th.....	7	210,000
Wednesday, April 6th.....	7	210,000
Thursday, April 7th.....	4	120,000
Friday, April 8th.....	5	150,000
Saturday, April 9th.....	..	.....
Monday, April 11th.....	4	120,000
Tuesday, April 12th.....	6	180,000
Wednesday, April 13th.....	5	150,000
Thursday, April 14th.....	4	120,000
Friday, April 15th.....	6	180,000
Saturday, April 16th.....	..	.....
Monday, April 18th.....	5	150,000
Tuesday, April 19th.....	4	120,000
Wednesday, April 20th.....	5	150,000
Thursday, April 21st.....	4	120,000
Friday, April 22d.....	2	60,000
Saturday, April 23d.....	..	.....
Monday, April 25th.....	2	60,000
Tuesday, April 26th.....	4	120,000
Wednesday, April 27th.....	5	150,000
Thursday, April 28th.....	3	90,000
Friday, April 29th.....	2	60,000
Saturday, April 30th.....	..	.....
Monday, May 2d.....	6	180,000
Tuesday, May 3d.....	..	.....
Wednesday, May 4th.....	..	.....
Thursday, May 5th.....	..	.....
Friday, May 6th.....	2	60,000
Saturday, May 7th.....	2	60,000
	97	2,910,000

TURNED OUT.

April 10, Nanticoke River, Cooper's Wharf,	300,000
13, Marshy Hope River.....	330,000
14, Nanticoke River, Knowles' Wharf.....	150,000
16, Marshy Hope River.....	300,000
18, Laurel River.....	270,000
20, Nanticoke River, Truitt's Wharf.....	180,000
25, Nanticoke River, Riverton	420,000
28, Nanticoke River, Sandy Point.....	180,000
30, Nanticoke River, Knowles' Wharf.....	180,000
May 4, Nanticoke River, Ellis' Wharf.....	300,000
6, Nanticoke River, Dickerson's Wharf.....	180,000
11, Nanticoke River, Ferry Landing.....	120,000
	2,910,000

S. P. TWIFORD,
Deputy.

Sharptown Hatching House, 1911.

	<i>Yellow Perch Stripped.</i>	<i>Fry Obtained.</i>
Tuesday, March 28th.....	75	2,250,000
Wednesday, March 29th.....	50	1,500,000
Thursday, March 30th.....	40	1,200,000
Friday, March 31st.....	100	3,000,000
Saturday, April 1st.....	100	3,000,000
Monday, April 3d.....	175	5,250,000
Tuesday, April 4th.....	150	4,500,000
Wednesday, April 5th.....	240	7,200,000
Thursday, April 6th.....	100	3,000,000
Friday, April 7th.....	75	2,250,000
Saturday, April 8th.....	50	1,500,000
	<hr/>	<hr/>
	1,155	34,650,000

TURNED OUT.

April 3d, Nanticoke River.....	2,250,000
4th, Marshy Hope River.....	2,700,000
7th, Nanticoke River.....	6,000,000
8th, Marshy Hope River.....	5,250,000
10th, Nanticoke River.....	4,500,000
11th, " "	7,200,000
12th, " "	3,000,000
13th, " "	2,250,000
14th, " "	1,500,000

S. P. TWIFORD,
Deputy.

Sharptown Hatching House 1911.

	<i>White Perch Stripped.</i>	<i>Fry Obtained.</i>
Monday, May 1st	25	750,000
Tuesday, May 2nd	30	900,000
Wednesday, May 3rd	20	600,000
Thursday, May 4th	40	1,200,000
Friday, May 5th.....	30	900,000
Saturday, May 6th.....	30	900,000
Monday, May 8th.....	20	600,000
Tuesday, May 9th	25	750,000
Wednesday, May 10th.....	15	450,000
Thursday, May 11th	15	450,000
Friday, May 12th	8	240,000
Saturday, May 13.....	12	360,000
	<hr/>	<hr/>
	270	8,100,000

TURNED OUT.

May 4, Marshy Hope River.....	1,650,000
9, Nanticoke River	1,800,000
11, Nanticoke River Riverton.....	1,800,000
15, Marshy Hope River.....	1,350,000
16, Nanticoke, Knowles' Wharf.....	450,000
22, Wicomico River, Salisbury.....	1,050,000

S. P. TWIFORD,
Deputy.

Sharptown Hatching House, 1911.

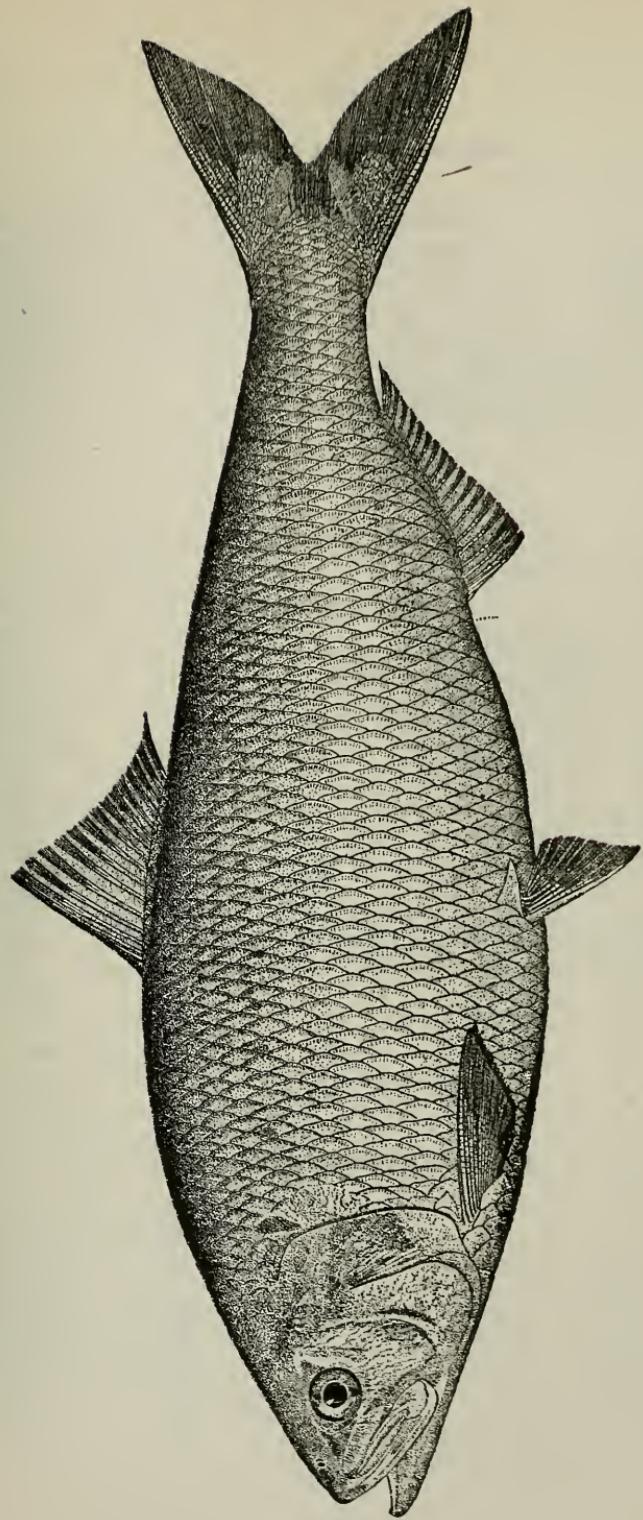
	<i>Shad Stripped.</i>	<i>Fry Obtained.</i>
Monday, April 17th.....	5	150,000
Tuesday, April 18th.....	3	90,000
Wednesday, April 19th.....	4	120,000
Thursday, April 20th.....	6	180,000
Friday, April 21st.....	8	240,000
Saturday, April 22d.....	7	210,000
Monday, April 24th.....	2	60,000
Tuesday, April 25th.....	7	210,000
Wednesday, April 26th.....	9	270,000
Thursday, April 27th.....	8	240,000
Friday, April 28th.....	10	300,000
Saturday, April 29th.....	6	180,000
Monday, May 1st.....	4	120,000
Tuesday, May 2d.....	7	210,000
Wednesday, May 3d.....	10	300,000
Thursday, May 4th.....	9	270,000
Friday, May 5th.....	8	240,000
Saturday, May 6th.....	6	180,000
Monday, May 8th.....	10	300,000
Tuesday, May 9th.....	10	300,000
Wednesday, May 10th.....	6	180,000
Thursday, May 11th.....	10	300,000
Friday, May 12th.....	8	240,000
	163	4,890,000

TURNED OUT.

April 24th, Nanticoke River, Cooper's Wharf.....	240,000
26th, Nanticoke River, Knowles' Wharf.....	300,000
28th, Nanticoke River, Truitt's Wharf.....	450,000
29th, Nanticoke River, Wheatley Wharf.....	270,000
May 3d, Nanticoke River, Riverton.....	510,000
4th, Nanticoke River, Sandy Point.....	480,000
8th, Marshy Hope River.....	630,000
11th, Nanticoke River, Cooper's Wharf.....	690,000
15th, Marshy Hope River.....	780,000
17th, Nanticoke River, Ellis' Wharf.....	540,000

S. P. TWIFORD,

Deputy.



SHAD.

Tuckahoe Hatching House, 1910.

Perch stripped.....	2150.
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WHERE DISTRIBUTED.	Fry Obtained.
Watts Creek, Choptank River.....	1,000,000
Wye Creek.....	1,500,000
Miles River.....	1,500,000
Cambridge.....	2,000,000
Greensboro, Choptank River.....	2,000,000
Lloyds, Tuckahoe River.....	1,000,000
At Station, Tuckahoe River.....	10,000,000
White Perch at Station, Tuckahoe River.....	2,000,000
 Total.....	 21,000,000

Shad for 1910.

Shad Stripped.....	207.
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WHERE DISTRIBUTED.	Fry Obtained.
April 22d, At Station, Tuckahoe.....	75,000
23d, Greensboro, Choptank River.....	500,000
28th, Millington, Chester River.....	500,000
30th, At Station, Tuckahoe.....	1,000,000
May 2d, Federalsburg, Nanticoke River	250,000
2d, At Station, Tuckahoe.....	750,000
4th, At Pocomoke River.....	1,000,000
6th, Princess Anne.....	600,000
6th, At Station, Tuckahoe.....	1,000,000
6th, Miles River.....	250,000
6th, Wye River.....	250,000
9th, At Station, Tuckahoe.....	500,000
12th, " " "	800,000
14th, Watts Creek, Choptank River.....	300,000
17th, Golden Hill, Chester River.....	500,000
18th, Tan Yard, Choptank River.....	500,000
 Total.....	 8,650,000

J. E. MORGAN,
Deputy.

Tuckahoe Hatching Station, 1911.

	Perch Stripped.	Fry Obtained.
March 18th.....	60	1,800,000
20th.....	120	3,600,000
21st.....	300	9,000,000
22d.....	233	6,990,000
23d.....	120	3,600,000
24th.....	40	1,200,000
25th.....	60	1,800,000
 Total fish stripped.....	 933	 27,990,000

DISTRIBUTION OF PERCH.

April 16th, Watts' Creek, Choptank, River.....	2,000,000
17th, Brick Mill, Choptank River.....	2,000,000
17th, Greensboro, Choptank River.....	3,000,000
18th, Millington, Chester River.....	2,000,000
19th, Wye River.....	3,000,000
21st, Miles River.....	3,000,000
21st, At station, Tuckahoe.....	5,000,000
22d, Centreville, Corsica River.....	4,000,000
22d, Tredavon.....	3,000,000
 Total.....	 27,000,000

J. E. MORGAN,

Deputy.

SHAD FOR 1911.

	<i>Shad Stripped.</i>	<i>Fry Obtained.</i>
April 11th.....	4	120,000
14th.....	6	180,000
19th.....	7	210,000
20th.....	11	330,000
21st.....	9	270,000
24th.....	10	300,000
25th.....	8	240,000
26th.....	9	270,000
27th.....	14	420,000
28th.....	12	360,000
29th.....	13	390,000
 May 1st.....	 16	 480,000
2d.....	17	510,000
3d.....	14	420,000
4th.....	12	360,000
5th.....	21	630,000
6th.....	16	480,000
8th.....	20	600,000
9th	12	360,000
10th.....	8	240,000
11th.....	9	270,000
12th.....	8	240,000
 Total.....	 256	 7,680,000

DISTRIBUTION OF SHAD.

April 23, At station, Tuchahoe.....	100,000
26, Brick Mill, Choptank River.....	250,000
29, Greensboro, Choptank River.....	300,000
30, Millington, Chester River.....	1,000,000
30, Georgetown Sassafras River.....	1,000,000
 May 1, At station, Tuckahoe.....	 100,000
3, Miles River.....	250,000
9, Wye River.....	250,000
12, Salisbury.....	1,800,000
13, Watts Creek, Choptank River.....	250,000
14, Federalsburg, Nanticoke River.....	500,000
15, Centreville.....	500,000
15, At station, Tuckahoe.....	500,000
17, At station, Tuckahoe.....	1,200,000
 Total.....	 7,680,000

J. E. MORGAN, *Dept.*

Salisbury Hatching House, 1910.**SHAD.**

<i>Date.</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
April 11th.....	.....	.....
14th.....	.....	.....
15th.....	30,000	25,000
16th.....	80,000	70,000
18th.....	128,000	125,000
19th.....	150,000	125,000
21st.....	150,000	125,000
22d.....	100,000	90,000
23d.....	150,000	140,000
25th.....	150,000	140,000
26th.....	140,000	125,000
27th.....	.....	.....
28th.....	180,000	160,000
29th.....	100,000	90,000
30th.....	100,000	80,000
May 2d.....	200,000	180,000
3d.....	250,000	225,000
4th.....	50,000	40,000
5th.....	50,000	40,000
7th.....	50,000	40,000
10th.....	40,000	25,000
13th.....	50,000	30,000
14th.....	.....	.....
	-----	-----
	2,148,000	1,885,000

WHERE DISTRIBUTED.

Pocomoke River.....	1,000,000
Manokin River.....	500,000
Wicomico River.....	385,000

	1,885,000

E. M. ELLIOTT,
Deputy.

Salisbury Hatching House, 1911.

SHAD.

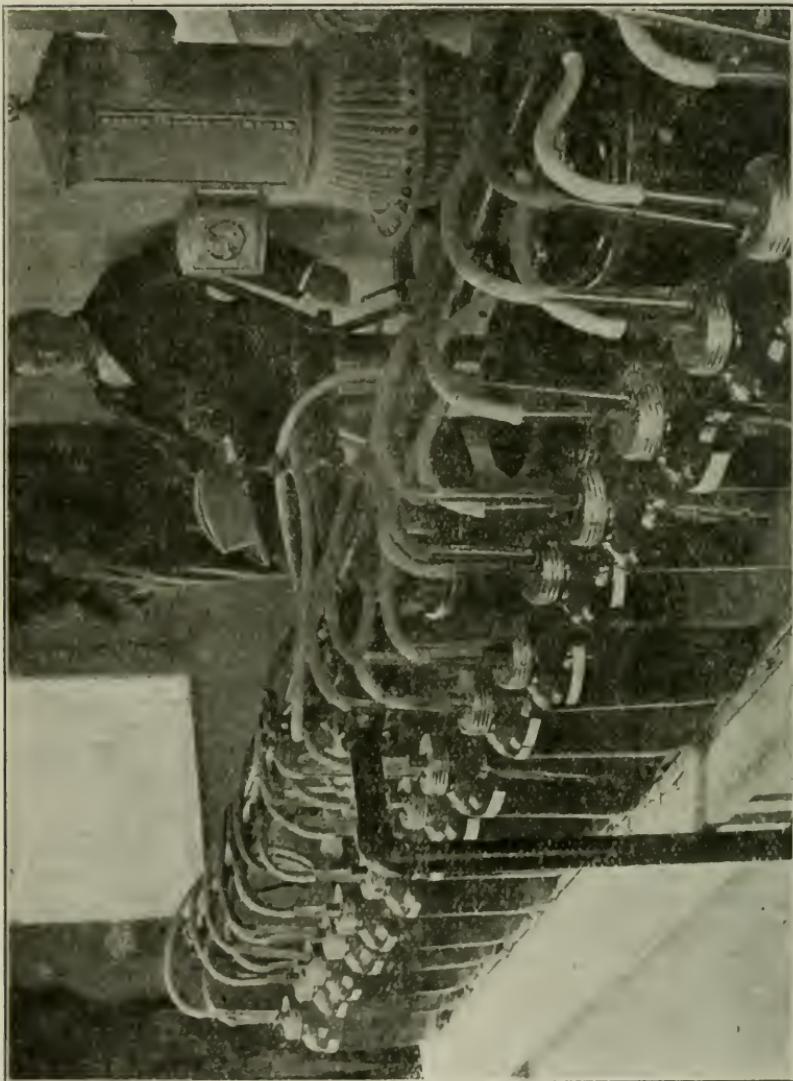
<i>Date</i>	<i>Eggs Obtained.</i>	<i>Fish Hatched.</i>
April 17th.....	150,000	140,000
" 18th.....	100,000	80,000
" 19th.....	125,000	100,000
" 20th.....	125,000	100,000
" 21st	250,000	200,000
" 22d.....	250,000	200,000
" 24th.....	75,000	50,000
" 25th.....	250,000	200,000
" 26th.....	250,000	200,000
" 27th.....	200,000	150,000
" 28th.....	250,000	200,000
" 29th.....	250,000	200,000
May 1st	300,000	250,000
" 2d.....	175,000	160,000
" 3d.....	200,000	180,000
" 4th.....	240,000	200,000
" 5th.....	250,000	200,000
" 6th.....	200,000	180,000
" 8th.....	200,000	140,000
" 9th.....	240,000	200,000
" 10th.....	325,000	300,000
" 11th.....	280,000	260,000
	4,785,000	3,890,000

WHERE DEPOSITED.

Pocomoke River.....	1,000,000
Manokin River.....	1,000,000
Wicomico River.....	1,000,000
Tulutanis Wicomico River.....	890,000
	3,890,000

E. M. ELLIOTT,
Deputy.

INTERIOR VIEW, HATCHING STATION.



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